

## CLAIMS

What is claimed is:

1. A grinding sludge compacting machine to compress and make a briquette of a grinding sludge by inserting a concentrated grinding sludge formed by filtering a grinding sludge, produced in a grinding line by grinding hardened component parts while containing a coolant, into a press unit comprising a cylindrical mold fixed on a machine bench, a first piston reciprocatingly movably inserted in the cylindrical mold and a second piston arranged in face-to-face relation with the first piston, and compressing the concentrated sludge;

a diameter of an end of the second piston being larger than an inner diameter of the cylindrical mold.

2. The grinding sludge compacting machine as claimed in claim 1, wherein the end of the second piston defines a gap in cooperation with an annular end of the cylindrical mold when the second piston is held in position adjacent the cylindrical mold, said gap defining a coolant drain passage.

3. The grinding sludge compacting machine as claimed in claim 1, wherein the gap is of a size within the range of 0.05 to 1.0 mm.

4. A press controller controlling a press unit with a squeezing chamber, to compress a grinding sludge to produce a briquette, comprising:

a first controller to determine a parameter of the grinding sludge;

a second controller to determine a compressing speed based on the parameter; and

a third controller to control the compressing speed,

wherein the parameter is at least one of a coolant content of the grinding sludge, a temperature of a coolant in the grinding sludge, an ambient temperature of the press unit, and a temperature of the squeezing chamber.

5. A grinding sludge compacting machine with a press unit having a squeezing chamber, to compress a grinding sludge to produce a briquette, the grinding sludge compacting machine comprising:

a press controller determining a parameter of the grinding sludge, continuously determining a compressing speed during a compression process based on the parameter, and automatically controlling the compressing speed,

wherein the parameter is at least one of a coolant content of the grinding sludge, a temperature of a coolant in the grinding sludge, an ambient temperature of the press unit, and a temperature of the squeezing chamber.